



BROEGELMANN RESEARCH LABORATORY

The Gade Institute

University of Bergen



ANNUAL REPORT

2007

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<http://www.uib.no/Broegelmann/brsi/index.html>

1. The Year in Review

2. Administration - Personnel - Scientists

Administration
Technical and administrative personnel
Postdoctoral fellows
Visiting scientists
Trainees

3. Teaching

Postgraduate teaching
Guestlectures

4. Scientific Activity

Completed doctoral theses
Aims of research
Collaborating institutions
Major projects
Collaborating projects

Publications

5. Editorial Activities – *Scandinavian Journal of Immunology*

6. Lectures – Seminars - Other activity

1. The Year in Review

2007 has been another exciting year for the Broegelmann Research Laboratory and its staff. The most important event was the 50-year anniversary of the opening of the Laboratory May 15 in 1957. The history behind and the total activity during these years was summarized in a book "Immunologisk Forskning i Bergen".

The Laboratory has continued to bond its place in the top league of international laboratories investigating systemic autoimmune diseases with a focus on Sjögren's syndrome. This year the Laboratory has also increased its efforts in tumor immunology. This was recognized by the "Søren Falch og øienlæge Sigurd Falchs Juniorpris 2007" to our newly recruited scientist Silke Appel. Silke Appel also was awarded a major 4-year grant support from *Bergen Forskningsstiftelse*.

Among the exciting events during the year have been the visits of students (Annet Ottesen from Univ of Oslo and Virgine Deswarte from Paris). Professor Jonsson's standing in the field of Sjögren's syndrome research was recognized by invitations to give a number of key-note lectures and/or chair scientific sessions worldwide (Uppsala, Turku, Rio de Janeiro, Boston). Laboratory members were invited to speak at other national and international meetings or author articles and/or chapters in scientific publications/books.

The Laboratory has published extensively this year in major international journals. The breadth of the Laboratory's approach to study autoimmunity and mucosal immunity is reflected in the diversity of fields in which publications have appeared, including Immunology, Neuroimmunology, Cancer, Infection & Immunity, Oral Medicine and Rheumatology.

Our Editorial Office for *Scandinavian Journal of Immunology* has received continuous attention by obtaining a steady influx of manuscripts in 2007. The impact factor for *Scandinavian Journal of Immunology* is increasing and launch of electronic submission and handling of manuscripts was set to Feb 1, 2006 through <http://mc.manuscriptcentral.com/sji>.

The Laboratory has a track record of success in obtaining international funding (EU, NATO). One success was the grant support from *the Translational Medical Research Consortium* to Silke Appel as well as from *Kreftforeningen*. Our grant support from *the Strategic Research Program at Helse Bergen*, and *Helse Vest* continues.

A major challenge will be to establish modern and up to date laboratory equipment and infrastructure. This is essential for being eligible and competitive for additional funding. Time and energy has during the year been spent on planning the laboratory facilities in the new Laboratory Building for spring 2009. 2007 has also been a productive year for cementing and establishing translational clinical and scientific collaborations. As an initiative to further increase the Laboratory's activity, interaction and integration, for the Research School Program at the University of Bergen "*The Bergen Research School in Inflammation (BRSI)*" established 5 separate research courses/seminars (HUIMM901-905), among those an advanced 3 day lecture workshop at Voss with highly renowned international speakers.

The Laboratory has a number of ongoing research projects including:

- Molecular studies of autoantibodies and biomarkers in Sjögren's syndrome
- Functional genomics and genetic basis of the autoimmune exocrinopathy (human/murine)
- Influenza and mucosal immunity
- Dendritic cells and tumor vaccines

Roland Jonsson
Head, Broegelmann Research Laboratory

2. Administration - personnel - scientists

The Broegelmann Research Laboratory (BRL) is an immunology research unit with a focus on *Autoimmunity and Mucosal Immunobiology* at the University of Bergen and Haukeland University Hospital. The Laboratory was initiated in 1957 after a donation to the University of Bergen and is co-localized and integrated with the Department of Microbiology and Immunology, the Gade Institute. Internationally the unit is one of the leading groups on *Experimental, Clinical and Genetic Studies of Sjögren's syndrome* and currently holds a EU funded *Marie Curie Training Site*. A broad repertoire of molecular and cellular methods in immunology and molecular biology has been established.

The core financial support comes from the Broegelmann Foundation. Other major funding agencies have been EU (five contracts – four as coordinator), the Research Council of Norway (“miljøstøtte”), Helse Vest, the Foundation Health and Rehabilitation, and more recently the Strategic Research Program at Helse Bergen. Between 1962 and 2007 BRL has contributed to the finalization of 60 PhD/doctoral and 15 Master degrees. BFL has been the organizer of three international immunology meetings in Bergen 1997, 2001 and 2002. Since 1999 the unit is one of three *Editorial offices for the Scandinavian Journal of Immunology* with Prof R. Jonsson as Editor-in-Chief. Currently, the major activity of the Journal is localized to Bergen.

RESEARCH AREAS:

The research activity at BRL has been devoted to the following areas: autoimmunity/chronic inflammation; molecular medicine; functional genomics; mucosal immunity; immunopathology; tumor immunology.

HEAD OF LABORATORY (from 1991):

Roland Jonsson DMD, PhD
Professor of medicine (The Broegelmann Chair in Immunology)
Director Bergen Research School in Inflammation

TECHNICAL/ADMINISTRATIVE PERSONNEL:

Kate Frøland (100% adm [70% BFL, 30% SJI])
Marianne Eidsheim (100% BFL)
Kjerstin Jacobsen (100% UiB) (incl. teaching)

POSTDOCTORAL/SENIOR RESEARCH FELLOWS:

Silke Appel PhD	(cellular/molecular immunology)
Oddmund Bakke PhD, (prof II)	(cellular/molecular immunology)
Anne Isine Bolstad DMD, PhD (prof)	(molecular biology/genetics)
Karl A. Brokstad PhD	(molecular immunology/cell biology)
Åke Davidsson MD, PhD	(ENT – mucosal immunity)
Arnt-Ove Hovden PhD	(cellular/molecular immunology)
Malin V. Jonsson DMD, PhD	(clinical immunology/rheumatology)

VISITING SCIENTISTS:

Annet Ottesen	PhD trainee, Univ of Oslo
Virgine Deswaerte	ERASMUS Master Student, Paris, France

TRAINEES:

Rheumatological immunology

Elisabeth Sivy Nginamau MD, doctoral degree student	Principal supervisor(s) Jonsson
Tor Magne Madland MD, doctoral degree student	Brun/Jonsson
Nicolas Delaleu MSc, doctoral degree student	Jonsson
Sergio Carracedo Huroz, MSc, doctoral degree student	Gullberg/Jonsson
Virginie Deswaerte, master degree student	Appel/Vogelsang
Petra Vogelsang MSc, doctoral degree student	Appel/Jonsson
Ewa Szyszko MSc, doctoral degree student	Brokstad/Skarstein/Jonsson
Karstein Halvorsen MD, doctoral degree student	Brun/Appel/Bolstad

Genetics in chronic inflammatory disease

Trond Ove Hjelmervik MSc, doctoral degree student	Bolstad/Jonsson
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Mucosal immunobiology

Jens-Christian Eriksson MD, doctoral degree student	Davidsson/Brokstad
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Affiliated with Broegelmann Research Laboratory (doctoral/master degree studies):

Carla Olsnes Msc, Dept of ENT, UoB	Aarstad
Pål Voltersvik MD, Dept of Medicine, UoB	Åsjö
Hiwa Målen MSc	Wiker/Jonsson

ADDITIONAL SCIENTISTS/KEY-COLLABORATORS AFFILIATED WITH THE LABORATORY AND WITH E.G. SUPERVISION FUNCTIONS PLUS JOINT PUBLICATIONS:

professor Vidar Bakken, Laboratory for Oral Microbiology
assoc prof Johan G. Brun, Div of Rheumatology, Med Dept B, Haukel Univ Hospital
professor Jan Olofsson, Department of Otolaryngology/Head & Neck Surgery, Haukeland Univ Hospital
assoc prof Kathrine Skarstein, Dept of Oral Pathology, The Gade Institute
professor Hans-Jørgen Aarstad, Department of Otolaryngology/Head & Neck Surgery, Haukeland Univ Hospital
professor Birgitta Åsjö, Center for Virology, the Gade Institute
professor Harald G. Wiker, Section for Bacteriology, the Gade Institute
professor Donald Gullberg, Dept of Physiology, Inst of Biomedicine

3. Teaching

POSTGRADUATE TEACHING

Continuously during the spring and fall semesters a *seminar series in immunology* was conducted every week with presentations from research fellows or invited speakers. On a weekly basis seminars were given related to research areas of the students/trainees (*project-meetings*). *Guest lectures* are an important part of intellectual stimulation. The scientists were teaching immunological techniques, autoimmunity, mucosal immunity and oral medicine in postgraduate courses and at other invited situations both at national and international gatherings.

Lecture workshop, March 21-24 at Voss: FROM INNATE TO SPECIFIC IMMUNITY

Advanced seminar with about 90 attendees, from all Norway and Scandinavia. Highly renowned international speakers.

Day of Immunology, April 25 - Program:

(see also: http://nyheter.uib.no/?modus=vis_nyhet&id=36267)

Velkommen – og presentasjon av Immunologiens dag v/ møteleder, professor **Roland Jonsson**, Bergen

”Fetal blood group determination: Maternal plasma vs. Amniotic Fluid”. Professor **Martin Olsson**, Lund University Hospital.

“Immunologiske funn ved kuldeindusert autoimmun hemolyttisk anemi”
Professor **Elling Ulvestad**, Bergen

”Immundefekter”. Førsteamanuensis **Einar Kristoffersen**, Bergen

The 50-year Anniversary of the Broegelman Research Laboratory, May 15 - Open Jubilee Seminar (see also: http://nyheter.uib.no/?modus=vis_nyhet&id=36563)

Program

- 10.00 Opening – Welcome
Roland Jonsson, DMD, PhD, Professor,
Head, Broegelman Research Laboratory
- 10.15 The History of the Broegelman Research Laboratory
Jacob B. Natvig, MD, PhD, Professor emeritus, Rikshospitalet, Oslo
- 11.00 Translational Studies in Rheumatology
Johan G. Brun, MD, PhD, Professor, Institute of Internal Medicine, Bergen
- 11.45 **The Complex Origins of Lupus Autoimmunity**
John B. Harley, MD, PhD, Member & Program Head,

Arthritis & Immunology, Oklahoma Medical Research Foundation
(The 11th Broegelmann Jubilee Lecture)

Awards was delivered by Supreme Court Barrister Jan Einar Greve, Chairman, The Broegelmann Foundation

The session was chaired by Professor Bjarne Bjorvatn, Member of the Board, The Broegelmann Foundation

GUESTLECTURES AND VISITORS AT BRL

- 7/2 LARS RÖNNBLUM, Uppsala Univ, Sweden - *"Systemic lupus erythematosus – an interferon driven disease with new therapeutic opportunities"*
- 28/2 ELKE THEANDER, Malmö Regional Hospital, Sweden: *"Living and dying with Sjögren's syndrome"*
- 27/9 LENNART JACOBSEN, Malmö Regional Hospital, Sweden: *"TNF blockade and cardiovascular disease. Experience from rheumatology"*
- 29/11 PATRICK VENABLES, Kennedy Inst of Rheumatology, UK: *"Antibodies to citrullinated proteins in the diagnosis and pathogenesis of rheumatoid arthritis"*

4. Scientific activity

COMPLETED THESIS IN 2007 WITH CONTRIBUTIONS FROM BRL:

Thangarajh M: B-cell-survival factors in multiple sclerosis and myasthenia gravis; Medicine doctor (med dr), thesis defence April 4, 2007. *Principal Institutes: Clinical Neuroscience, Karolinska Institute, and Broegelmann Research Laboratory, The Gade Institute, University of Bergen. Supervisor: Jan Hillert*

Madland TM: Calprotectin (S100A8/A9) and S100A12 in inflammatory arthritis; clinical and epidemiological studies of rheumatoid arthritis and psoriatic arthritis. Doctor medicinae (dr. med.), thesis defence Dec 14, 2007. *Principal Institutes: Department of Rheumatology, Institute of Internal Medicine and Broegelmann Research Laboratory, The Gade Institute, University of Bergen. Supervisors: Johan G. Brun, Roland Jonsson.*

SPECIFIC AIMS OF THE RESEARCH AT BRL:

The laboratory targets its efforts within the fields of autoimmunity, mucosal immunity, immunopathology and tumour immunology. *The work is directed towards basic immunological questions incl. genetics in rheumatological and mucosal immunity as well as clinical immunological topics.* Furthermore, experimental autoimmune/rheumatological research is conducted in murine systems. The laboratory work is performed with immunomorphological and functional immunological techniques at both cellular and molecular levels in human and murine tissues, sera, and secretions as well as in tissue- and cell-cultures. Specific areas of interest are summarized below:

- **AUTOIMMUNITY**

Autoimmune reactions are of central importance in the etiology of many somatic diseases. Different tissues can be affected in different ways but a common denominator is a **chronic inflammation**, which can result in tissue damage and accompanying loss of function. Our aim is to study disease mechanisms in connective tissue diseases (Sjögren's syndrome and rheumatoid arthritis) with special reference to exocrine gland and joint tissue. For this purpose we combine studies in both human and murine systems, which hopefully will help us in elucidating pathogenic mechanisms and more recently the genetic background as a basis for better diagnosis and therapy. The immunological aspect is concerned with cellular and molecular characterization of lesions, quantitation of humoral and cellular immune responses against endogenous and exogenous antigens, as well as attempts at immunomodulation. Special attention is given to programmed cell death (apoptosis) in relation to the chronic inflammatory disorders (Sjögren's syndrome, rheumatoid arthritis, adult periodontitis).

- **MUCOSAL IMMUNITY**

Mucous membranes constitute important defence mechanisms for the body and contain important humoral effector functions via the humoral immune system. A change in the regulation of immunity can however give rise to undesirable side effects which may result in tissue lesions in mucous membranes of the oral cavity, the gastro-intestine, the vagina, the lungs, the exocrine glands etc. Furthermore, the body is normally confronted with the first antigen contact/stimulation through the mucous membranes. Our aim is to study antigen presentation in mucous membranes and to characterize defence mechanisms and pathological immunological situations. Knowledge obtained within this field is of particular importance for better diagnostic and preventive/treatment measures e.g. vaccines.

- **TUMOR IMMUNOLOGY**

The immune system obviously has an important role in the development of malignant tumors. Our interests within this are: role of dendritic cells, T cells, macrophages, cytokines and apoptosis incl. regulating molecules in tumor development.

The scientific activity at BRL is concentrated much on an international profile with a vast network. Internationally BRL has kept and established contact with more than 10 foreign research institutions, mainly in Sweden, other European countries, Australia and USA. The work is characterized by "crossing" scientific fields aiming both towards clinical and basic research, laying the ground for truly translational medicine.

COLLABORATION IS ESTABLISHED WITH THE FOLLOWING LOCAL RESEARCH INSTITUTIONS:

University of Bergen – Haukeland University Hospital

- A. Department of Microbiology and Immunology, Sections for immunology, bacteriology and virology, The Gade Institute
- B. Section of Rheumatology, Institute of Medicine
- C. Department of Otolaryngology/Head & Neck Surgery
- D. Centre for Clinical Molecular Medicine/Dept of Medical Genetics
- E. Centre for International Health
- F. Department of Pathology and Oral Pathology, The Gade Institute
- G. Laboratory for Oral Microbiology

H. In addition, collaboration (joint grants/publications and/or sharing of reagents/materials) is established with the following laboratories/institutions:

1. *Experimental rheumatic disease in murine models* (R. Holmdahl, Dept of Medical Inflammation Research, Lund Univ, Sweden)
2. *Genetic studies in Sjögren's syndrome and Potential viral etiology of autoantibody (Ro) production* (J. Harley, Arthritis and Immunology Program, Oklahoma Medical Research Foundation, OK, USA)
3. *Anti-Ro and anti-La antibody studies* (M. Wahren, Centre for Molecular Medicine, Department of Rheumatology, Karolinska Institute, Stockholm, Sverige)
4. *Human/murine Ro and La antigens, aquaporins and muscarinic receptors* (T. Gordon, Tissue Typing and Immunogenetics, Flinders University Hospital, Adelaide, Australia)
5. *Muscarinic receptors and autoimmunity* (Ammon B. Peck, University of Gainesville, FL, USA)
6. *Clinic/Epidemiology of inflammatory rheumatic disease* (R. Omdal, Section for Clinical Immunology, Stavanger Hospital)
7. *Experimental model of Sjögren's syndrome* (Hal Scofield, Arthritis and Immunology Program, Oklahoma Medical Research Foundation, OK, USA)
8. *Integrins and matrix biology* (Donald Gullberg, Section for Physiology, Institute of Biomedicine, UoB)
9. *Mycobacterial immunity and vaccine development* (Harald G. Wiker, Section for Bacteriology, the Gade Institute, UoB)
10. *Design of tumor specific immunotherapies* (Hans-Jørgen Aarstad, Dept of Otolaryngology/Head & Neck Surgery, Haukeland University Hospital)

MAJOR PROJECTS

Antigen induced immune modulation and autoimmunity (PhD thesis work for Nicolas Delaleu)

Role of dendritic cells in primary and experimental Sjögren's syndrome (PhD thesis work for Petra Vogelsang)

B cells, autoantigens and autoantibodies in Sjögren's syndrome (PhD thesis work for Elisabeth Nginamau and Ewa Szyszko)

Autoimmunity and pathogenesis of murine sialadenitis – lymphoid neogenesis (part of this is PhD thesis work for MV Jonsson)

The genetics of Sjögren's syndrome; identification of susceptibility genes and global gene expression studies (part of this is PhD thesis work for Hjelmervik)

Influenza and mucosal immunobiology group (FLUMID) (PhD thesis work for Eriksson and Mittelholzer, post doc project Davidsson)

OTHER COLLABORATIVE PROJECTS:

- **Relations between immune functions/cytokines, psychological status and cancer development** (Heimdal/Aarstad)
- **B-cell activity (anti-p24 and anti-gp120) in tonsils and peripheral blood from humans with HIV infection** (Voltersvik)

PUBLICATIONS from the LABORATORY in 2007

Alex P, Szodoray P, Knowlton N, Dozmorov IM, Turner M, Frank MB, Arthur RE, Willis L, Flinn D, Hynd RF, Carson C, Kumar A, El-Gabalawy HS, Centola M. Multiplex serum cytokine monitoring as a prognostic tool in rheumatoid arthritis. *Clin Exp Rheumatol*. 2007 Jul-Aug;25(4):584-92.

Appel S, Brossart P. Development of novel compounds to treat autoimmune and inflammatory diseases and graft versus host reactions. *Endocrine, Metabolic & Immune Disorders - Drug Targets*, 7:93-97, 2007.

Brun JG, Jonsson R. Sjögrens syndrom. *Norsk Epidemiologi*, in press.

Eriksson J-C, Cox RJ, Szyszko E, Davidsson Å, Brokstad KA. The local and systemic cytokine and chemokine response after parenteral influenza vaccination. *Influenza and Other Respiratory Viruses*, 1(4), 139–146, 2007.

Fladeby C, Gupta SN, Barois N, Lorenzo PI, Simpson JC, Saatcioglu F, Bakke O. Human PARM-1 is a novel mucin-like, androgen-regulated gene exhibiting proliferative effects in prostate cancer cells. *Int J Cancer*. 2007 Nov 20; [Epub ahead of print]

Haldorsen K, Moen K, Jacobsen H, Jonsson R, Brun JG. Exocrine function in Sjögren's syndrome. Natural course and prognostic factors. *Ann Rheum Dis*, 2007 Oct 26 [Epub ahead of print]

Hauge S, Madhun AS, Cox RJ, Brokstad KA, Haaheim LR. A comparison of the humoral and cellular immune responses at different immunological sites after split influenza virus vaccination in mice. *Scand J Immunol* 65:14-21, 2007.

Hjelmervik TOR, Lindqvist A-K, Petersen K, Johannesson M, Jonassen I, Johansson Å, Jonsson R, Holmdahl R, Bolstad AI. The influence of the NOD Nss1/idd5 loci on sialadenitis and gene expression in salivary glands of congenic mice. *Arthritis Res Ther*. 2007 Sep 27;9(5):R99 [Epub ahead of print]

Hovden AO, Cox RJ, Haaheim LR. Influenza: the virus and prophylaxis with inactivated influenza vaccine in at "at risk" groups, including COPD patients. *Int. J COPD*. 2007, Oct;2(3):229-40

Isaken R, Jonsson R. Immunologisk forskning i Bergen – Broegelmanns Forskningslaboratorium 1957-2007. Bergen 2007- 184 pages, ISBN: 978-82-7128-434-3

James JA, Kim-Howard XR, Bruner BF, Jonsson MK, M^cClain MT, Arbuckle MR, Walker C, Dennis GJ, Merrill JT, Harley JB. Hydroxychloroquine sulfate treatment is associated with later onset of systemic lupus erythematosus. *Lupus* 16:401-409, 2007.

Jonsson MV, Delaleu N, Jonsson R. Animal models of Sjögren's syndrome. *Clinic Rev Allergy Immunol* 32:215-224, 2007.

Jonsson MV, Skarstein K, Jonsson R, Brun JG. Serological implications of germinal center-like structures in primary Sjögren's syndrome. *J Rheumatol*, 2007 Sep 1; [Epub ahead of print] 2007;34(10):2044-9

Jonsson R. (Book review) *Defending Life – the nature of host-parasite interaction* by E. Ulvestad, 2007. *Scand J Immunol* 66:372, 2007.

Jonsson R, Ljunggren HG, Vicente Rizzo L. Editorial. *Scand J Immunol*. 2007 Aug;66(2-3):105.

Jonsson R, Bolstad AI, Brokstad KA, Brun JG. Sjögren's syndrome – a plethora of clinical and immunological phenotypes with a complex genetic background. *Ann NY Acad Sci* 1108:433-447, 2007.

Jonsson R, Nginamau E, Szyszko E, Brokstad KA. Role of B cells in Sjögren's syndrome – from benign lymphoproliferation to overt malignancy. *Front Biosci*, 12:2159-2170, 2007.

Juhasz B, Der P, Szodoray P, Gesztelyi R, Lekli I, Bak I, Antal M, Maulik N, Tosaki A, Vecsernyes M. Adrenocorticotrope hormone fragment (4-10) attenuates the ischemia/reperfusion-induced cardiac injury in isolated rat hearts. *Antioxidants & Redox Signaling*. 9(11):1851-1862, 2007.

Szodoray P, Alex P, Chappell-Woodward CM, Madland TM, Knowlton N, Dozmorov I, Zeher M, Jarvis JN, Nakken B, Brun JG, Centola M. Circulating cytokines in Norwegian patients with psoriatic arthritis determined by a multiplex cytokine array system. *Rheumatology (Oxford)*. 2007 Mar;46(3):417-25. Epub 2006 Aug 27

Thangarajh M, Masterman T, Hillert J, Moerk S, Jonsson R. A Proliferation-Inducing Ligand (APRIL) is expressed by astrocytes and is increased in multiple sclerosis. *Scand J Immunol* 65:92-98, 2007.

von Bultzingslowen I, Sollecito TP, Fox PC, Daniels T, Jonsson R, Lockhart PB, Wray D, Brennan MT, Carrozzo M, Gandera B, Fujibayashi T, Navazesh M, Rhodus NL, Schiodt M. Salivary dysfunction associated with systemic diseases: systematic review and clinical management recommendations. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2007 Mar;103 Suppl:S57.e1-S57.e15.

Abstracts

- Carracedo Huroz S, Popova S, Lu N, Jonsson R, Gullberg D. Regulation of alpha11beta1 integrin levels in vitro; identification of mechanical strain as a positive regulator of alpha11 integrin expression. *Inflammation Res* 56 (suppl. 3) Abstract#FC08.1; S391, 2007 (also presented orally)
- Delaleu N, Immervoll H, Cornelius J, Jonsson R. Biomarker Profiles in Serum and Saliva of Non-Diabetic NOD Mice - identification of components associated with autoimmune manifestations of Sjögren's syndrome. Poster P1510 International Congress of Immunology Rio de Janeiro Brazil August 21-25; 2007 (also presented orally)

- Hjelmervik TO, Jonsson R, Bolstad AI. Identification of differentially expressed proteins in minor salivary glands from patients with Sjögren's syndrome and healthy controls. 13th International Congress of Immunology. Rio de Janeiro, Brazil, 21-25th Aug 2007. Control No. 2007-A-3494-ICI.
- Hovden A-O, Cox RJ, Brokstad KA, Major D, Wood J, Haaheim LR. Immunisation of mice with egg-grown whole inactivated avian influenza H7N1 virus vaccine. Poster P1510 International Congress of Immunology Rio de Janeiro Brazil August 21-25; 2007. Poster.
- Jonsson R. Current understanding of Sjögren's syndrome. Eur J Clin Invest, 37 (suppl. 1, 15-83) Abstract #96, p. 32, 2007. Oral presentation.
- Nginamau E, Jonsson R. Cell surface antigens in Sjögren's syndrome. Abstract #P0441, 2007. International Congress of Immunology, Rio de Janeiro, Brazil. Poster.
- Nginamau E, Jonsson R. Identification of cell surface autoantigens in Sjögren's syndrome. Inflammation Res 56 (suppl. 3) Abstract #P09.08; S457, 2007. Poster.
- Szyszko EA, Brokstad KA, Jonsson R, Skarstein K. Plasma cells in the salivary glands of Sjögren's syndrome. 3rd Inf Conf on Autoimm; Mechanisms and Novel Treatments. Abstract #73. 7-12 October 2007, Rhodes, Greece. Poster.

5. EDITORIAL ACTIVITIES – *Scandinavian Journal of Immunology*

Since 1999 BRL has been serving as the central Editorial Office for *Scandinavian Journal of Immunology*. This activity means a number of international contacts in addition to the reviewing of scientific immunology papers. K. Frøland is part-time employed as Editorial Assistant with responsibilities for contacts with the publisher Blackwell Science, address lists for subscribers, economy etc.

Jonsson - Editor-in-Chief (shared responsibility): *Scandinavian Journal of Immunology* (1999 - present)

Jonsson - Editorial Board Member/Advisory Editor: *Scandinavian Journal of Immunology* (1995 - 1999); *European Journal of Oral Sciences* (1999 - 2005); *Scandinavian Journal of Rheumatology* (2000 – present); *Arthritis & Rheumatism* (2000 – 2004); *Current Rheumatology Reviews* (2004 – present); *Up-to-date Rheumatology* (2005 – present).

Referee: *Annals of the Rheumatic Diseases*, *Arthritis & Rheumatism*, *Clinical and Experimental Rheumatology*, *Journal of Oral Pathology & Medicine*, *Journal of Rheumatology*, *Rheumatology*, *Scandinavian Journal of Immunology*, *Scandinavian Journal of Rheumatology*, *European Archives of Oto-rhino-laryngology*.

6. LECTURES – SEMINARS - OTHER ACTIVITY

Roland Jonsson - 2007

Invited speaker:

Uppsala: **Current understanding of Sjögren's syndrome**

Turku: ***Scandinavian Journal of Immunology* - a truly international journal**

Rio de Janeiro: **Current concepts on Sjögren's syndrome**

Boston: **Recent findings in oral pathology of Sjögren's syndrome**

Evaluation of research grant proposals:

The Danish Research Agency – International Expert Evaluator 2007

Tromsø Univ Hospital

Sahlgrenska Academy

During this year R. Jonsson has been involved in organizing the following International Scientific Meeting(s): The Scientific Committee of “The 8th World Congress of Inflammation”, Copenhagen 2007.

Appointed vice-chairman, the Gade Institute, with main responsibility for teaching, from 2005.